

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

REA

Lineman

REPRINTED FROM OCTOBER, 1943

RURAL ELECTRIFICATION NEWS

Eight Deaths in Three Months

A POST-MORTEM is gruesome business. But if co-op board members, managers, supervisors, foremen and employes will study fatal accidents which have occurred, and do everything in their power to prevent accidents on their own systems and to themselves, the distasteful task will be well worthwhile.

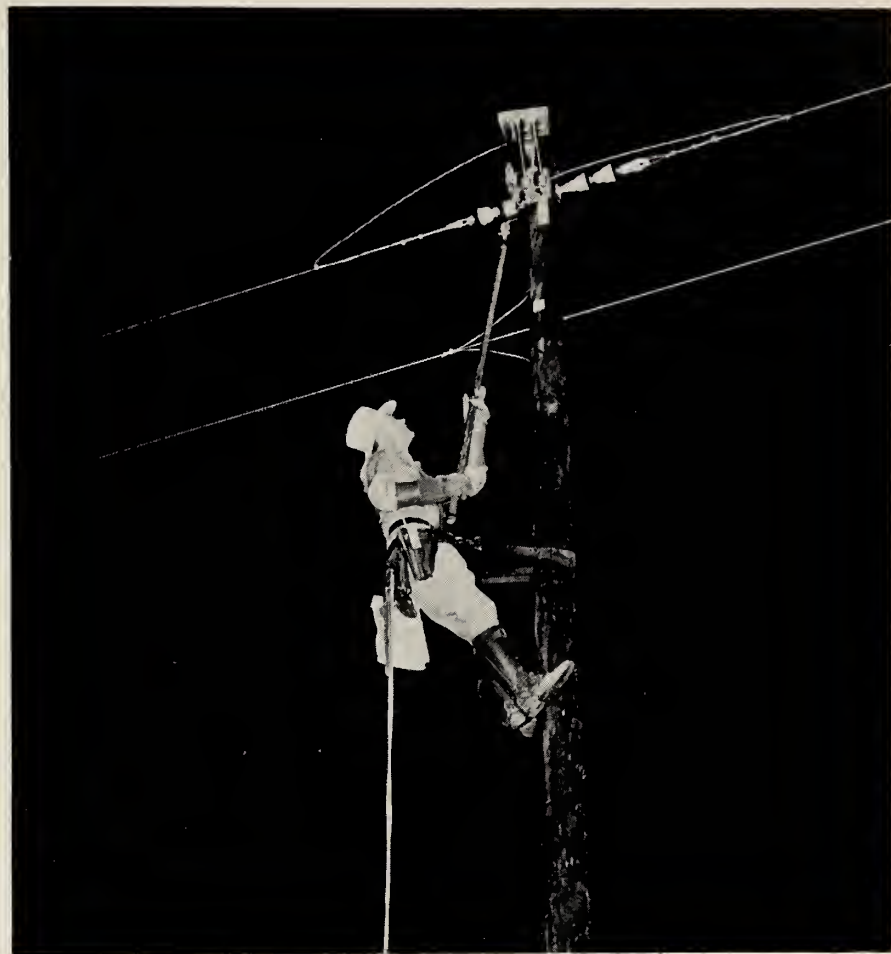
Since the last issue of "The Lineman," which reported four fatal accidents for May, eight more accidental deaths were reported for the next three months of June, July, and August.

Four of the deaths occurred on lines which either the men who were killed or their supervisors thought to be de-energized. They "didn't know the gun was loaded." A fifth fatal accident, details of which are not yet available, also may fall into the same class of "didn't know the line was energized."

Fatal accidents for the three months are listed in the order in which they occurred:

A line foreman, A, was killed, and burns were found on the top back of the head and backs of both of his hands. A meter had burned in a storm. The foreman made tests and discovered that a surge had developed at the transformer, blowing the internal fuse. He climbed, preparing to snap his safety belt between the middle and lower spools of the three-wire service assembly as well as between the brackets of the transformer. Quoting the report: "In this position he would naturally clinch the pole with his right knee and lean forward so his body would be on a level with the bulb of the tub. When he leaped forward he no doubt contacted or came too close to the ring gap. It was misting, the pole and his cap were wet . . . The current entered the head and came out at the hands.

A lineman, B, was killed—left three children. The crew found a damaged lightning arrester on a single-phase dead-end transformer. B instructed another lineman to de-energize about five sections away.



Shortly afterward he climbed the pole and contacted primaries. It is assumed by the manager that B saw the other linemen at the bottom of the pole and *assumed* the line was already de-energized. Burns in the palms of both hands.

A 25-year-old lineman, C, was killed, leaving two children. Burns were on the hands. A tree limb blew across the three-phase line. The top phase burned in two, and the limb rested on the other two. *Assuming the fuses had blown*, C climbed the tree and was tying a line to the limb when he received a shock. He did not wear rubber gloves, nor was his safety belt fastened, so he fell 30-35 feet. Resuscitation attempts failed.

A lineman, D, was killed while helping to move a building under a live line. He was on the metal roof of the building to lift the primary. Neutral rested on the

roof. The wire slipped from the hot stick, and struck D's shoulder. He died two days later.

An employee, E, was doing right-of-way work. On reaching a river, he decided to swim to avoid the long walk to a bridge. E sank near the opposite bank.

A lineman, F, was killed on his day off. A storm broke two wires which he found and started to repair. Meanwhile since F's whereabouts were unknown, another worker was instructed to reclose the oil circuit breaker at the substation. F was in the act of skinning the wire for a splice, had a firm grip on the wire and was standing on the wet ground when the current came on.

A lineman, G, was electrocuted. Lightning had shattered a cross-arm. The chief supervisor sent out a crew, and took G to pull disconnects, then they went to the

point of trouble on the main line. Another lineman and G climbed the pole. The other lineman lifted a phase and dropped it to the ground. G took hold of the phase on his side, which was energized by a feed-back from a loop circuit from the opposite direction. The crew was excited and G was not removed until ½ hour to an hour later when the superintendent arrived. The men had been warned of the hazard and instructed to place grounds. This had been done before, but was neglected this time.

Details are lacking on the final August fatality, except that the victim suffered electric shock and a broken neck.

Among the fatalities listed above, A was obviously too high on the pole. His body was on a level with the transformer, and his head was flirting with 6900 volts of sudden death coming in at the top of the transformer. Even so, the current came out of his hands. While the real trouble apparently was in climbing too high, the fatal contact which did occur through the hands would not have occurred with rubber gloves.

Again we say, "wear rubber gloves from the ground up."

B assumed the line was dead. It wasn't, but he is.

If you can't see a protective ground from where you are working, you must consider the line to be energized.

C assumed the fuses had blown because one wire was broken, and the limb lay across the other two. He'd be alive and working today if he had assumed that the line was energized and acted accordingly. Study that accident. No rubber gloves, safety belt not fastened, no protective ground.

D, his supervisor or manager obviously was taking a long chance in an effort to avoid an interruption in service to consumers. The fact that the "neutral rested on the roof" would indicate that the building was rather high, and it must have required considerable lift, from a position with poor footing, to raise the primary. Try to reconstruct the accident. A man, walking on the sloping roof of a moving building, lifting a taut, heavy wire with a hot-stick. One slip and the lineman formed a direct circuit between the primary and the neutral. Obviously, all co-op members would rather have their service interrupted for a half-hour than to have one of their employees electrocuted.

E tried a shortcut. He was probably hot, considering mid-July weather, and may well have suffered a cramp. The hasty way is not always the quickest way to get a job done.

F used poor judgment, in assuming the

power would stay off, even though he knew the line was dead. Again, a protective ground where he could see it would have prevented F's death.

G must have been positive in his own mind that the line was dead. He had been along to pull the disconnects—and perhaps pulled them himself. The one phase undoubtedly was dead, for the other lineman had handled it without injury. However, the phase on G's side was hot. In this accident, several safety rules seem to have been violated. There was no protective ground, and rubber gloves were not worn. And after the accident, crew members did not know what to do.

Not a single one of the fatal accidents occurred on systems having an active REA Safety and Job Training program. At least six, and possibly seven of the eight deaths can be attributed to open violation of safety rules laid down in "Operations Memorandum 22.3". The safety rules in this memorandum should be followed by every system manager and every line crew employee.

A Good Record is Ruined

BEGINNING in October, 1942, REA systems piled up a record of more than six months without a single fatal accident. But the fine record was broken in May. Eight other accidental deaths followed in the next three months, for a total of 12 fatal accidents.

Was this necessary?

Think this over. *Not one of the 12 deaths occurred on a system participating in the REA Safety and Job Training Program.*

How many of these 12 fatal accidents would have been prevented if all REA systems had taught their employees the proper and safe way to do the jobs, and made it mandatory that they observe all safety rules?

Some day every rural electric system operator will sponsor safety and job training programs.

Enemy Action

FROM Pearl Harbor until August 8, 1943, the casualties among men in armed forces, including the Merchant Marine, were: killed, 19,581; wounded, missing and prisoners, 84,351.

On the home front, casualties to civilian workers from July, 1940, to January 1943, were: killed, 48,500; injured, 5,300,000.

The war casualty period represents about 21 months with a monthly average of about 930 killed by enemy action and in training.

The home front survey covers 30 months, with accident action taking a toll of 1,600 lives monthly.

Wounded, missing and prisoners represent an average 4,000 a month for the period, while 175,000 home front workers were injured per month, and many of the injuries were fully as severe as comparable war wounds.

Is your REA cooperative doing its share toward reducing home front accidental deaths and injuries?

Fuses Don't Always Blow

THIS is the story of a \$100 part-Jersey cow, killed by the lines of the McCulloch County Electric Cooperative, Brady, Tex., as told by the system manager, P. M. Lembeck.

"Lightning struck a copper primary mid-way in a span and burned it in two. Both ends dropped to the ground and whipped back and forth in the wind, scorching stumps and grass along the right-of-way, and fusing cones of caliche earth, but never blowing the fuse on the line.

"The cow was killed from a burn high on her foreleg when she came in contact with the line. Other stock grazing in the same pasture gathered around the dead one, but a small boy drove them away when he saw the situation. Later several neighborhood men came to watch the line until the line crew came.

"The manager and lineman were not excited to see two men sitting within a few feet of the end of the wire on the ground, with the high wind blowing toward them. They were sure the line was dead. 'That's what line fuses are for,' they thought.

"The manager got out to talk with the men and wait until the lineman drove back a mile and took off a hot line clamp preparatory to repairing the line. Still neither knew the line was hot. When the lineman climbed the pole to take off the hot line clamp, he heard the hum of the hot line and suddenly realized that the fuses were not blown. Meanwhile the manager had been told by the watching men that the line was still hot. When the lineman returned both he and the manager were much relieved to see the other still living.

"This story could have ended with the little boy, the two men, the manager and the lineman all on the ground with the cow, but it didn't. But it taught us to be positive the line is dead before proceeding with repairs."